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World Intellectual Property Organization (WIPO) - Geneva, Switzerland
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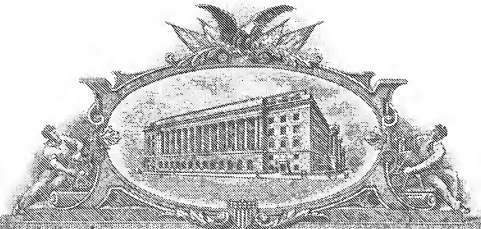

136-936

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September 06, 2005

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APPLICATION NUMBER: *11/011,393*
FILING DATE: *December 14, 2004*
RELATED PCT APPLICATION NUMBER: *PCT/US05/26758*

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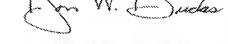

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PTO/SB/05 (09-04)
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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	70015990-0037-010
First Inventor	URBANEK, Tibor
Title	AMPLIFIER FOR USE WITH VOICE OVER INTERNET PROTOCOL SIGNAL
Express Mail Label No.	EV 460868077 US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☑ **Fee Transmittal Form** (e.g., PTO/SB/17)
   (Submit an original and a duplicate for fee processing)
2. ☐ **Applicant claims small entity status.**
   See 37 CFR 1.27.
3. ☑ **Specification** [*Total Pages* 14]
   Both the claims and abstract must start on a new page
   (For information on the preferred arrangement, see MPEP 608.01(a))
4. ☑ **Drawing(s)** *(35 U.S.C. 113)* [*Total Sheets* 3]
5. **Oath or Declaration** [*Total Sheets* 2]
   a. ☑ Newly executed (original or copy)
   b. ☐ A copy from a prior application (37 CFR 1.63(d))
   (for continuation/divisional with Box 18 completed)
   i. ☐ DELETION OF INVENTOR(S)
   Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ **Application Data Sheet.** See 37 CFR 1.76
7. ☐ **CD-ROM or CD-R** in duplicate, large table or Computer Program *(Appendix)*
   ☐ Landscape Table on CD
8. **Nucleotide and/or Amino Acid Sequence Submission**
   (if applicable, items a. – c. are required)
   a. ☐ Computer Readable Form (CRF)
   b. Specification Sequence Listing on:
      i. ☐ CD-ROM or CD-R (2 copies); or
      ii. ☐ Paper
   c. ☐ Statements verifying identity of above copies

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ACCOMPANYING APPLICATION PARTS

9. ☐ **Assignment Papers** (cover sheet & document(s))
   Name of Assignee_____
10. ☐ **37 CFR 3.73(b) Statement** *(when there is an assignee)* ☑ **Power of Attorney**
11. ☐ **English Translation Document** *(if applicable)*
12. ☐ **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    ☐ Copies of citations attached
13. ☐ **Preliminary Amendment**
14. ☑ **Return Receipt Postcard** (MPEP 503)
    (Should be specifically itemized)
15. ☐ **Certified Copy of Priority Document(s)**
    (if foreign priority is claimed)
16. ☐ **Nonpublication Request** under 35 U.S.C. 122(b)(2)(B)(i).
    Applicant must attach form PTO/SB/35 or equivalent.
17. ☑ Other: Certificate of Mailing by Express Mail

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: .....

Prior application information: *Examiner* _____ *Art Unit:* _____

19. CORRESPONDENCE ADDRESS

☑ The address associated with Customer Number: 26263 *OR* ☐ Correspondence address below

Name			
Address			
City	State	Zip Code	
Country	Telephone	Fax	

Signature		Date	December 14, 2004
Name (Print/Type)	Brian R. McGinley	Registration No. (Attorney/Agent)	47,782

PTO/SB/17 (11-04)
Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Effective on 10/01/2004. Patent fees are subject to annual revision.

FEE TRANSMITTAL
For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 790

Complete if Known	
Application Number	
Filing Date	
First Named Inventor	URBANEK, Tibor
Examiner Name	
Art Unit	
Attorney Docket No.	70015990-0037-010

METHOD OF PAYMENT (check all that apply)

☐ Check ☑ Credit Card ☐ Money Order

☐ Deposit Account ☐ None

Deposit Account Number: 50-1126

Deposit Account Name:

The Director is hereby authorized to: (check all that apply)

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FEE CALCULATION

1. BASIC FILING FEE

Fee Description	Fee ($)	Small Entity Fee ($)	Fee Paid($)
Utility Filing Fee	790	395	790
Design Filing Fee	350	175	
Plant Filing Fee	550	275	
Reissue Filing Fee	790	395	
Provisional Filing Fee	160	80	

Subtotal (1) $ 790

FEE CALCULATION (continued)

2. EXTRA CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20	18	9
Each independent claim over 3	88	44
Multiple dependent claims	300	150
For Reissues, each claim over 20 and more than in the original patent	18	9
For Reissues, each independent claim more than in the original patent	88	44

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)
20 - 20 or HP =	0	x	=

HP = highest number of total claims paid for, if greater than 20

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
3 - 3 or HP =	0	x	=

HP = highest number of independent claims paid for, if greater than 3

Multiple Dependent Claims	Fee ($)	Fee Paid ($)

Subtotal (2) $ _____

3. OTHER FEES

Fee Description	Fee ($)	Small Entity Fee ($)	Fee Paid($)
1-month extension of time	110	55	
2-month extension of time	430	215	
3-month extension of time	980	490	
4-month extension of time	1,530	765	
5-month extension of time	2,080	1,040	
Information disclosure stmt. fee	180	180	
37 CFR 1.17(q) processing fee	50	50	
Non-English specification	130	130	
Notice of Appeal	340	170	
Filing a brief in support of appeal	340	170	
Request for oral hearing	300	150	
Other: _____			

Subtotal (3) $ _____

SUBMITTED BY

Signature		Registration No. (Attorney/Agent) 47,782	Telephone (816) 460-2605
Name (Print/Type)	Brian R. McGinley	Date	December 14, 2004

Certificate of Mailing by EXPRESS MAIL
under 37 CFR 1.10

I hereby certify that the following documents:

Utility Patent Application Transmittal (1 pg); Fee Transmittal for FY 2005 (1 pg); Credit Card Payment Form for $790.00 filing fee; Utility Patent Application for AMPLIFIER FOR USE WITH VOICE OVER INTERNET PROTOCOL SIGNAL(14 pgs); Drawings (3 pgs); Declaration and Power of Attorney (2 pgs); Return receipt postcard

are being deposited with the United States Postal as "Express Mail Post Office to Addressee" and addressed to:

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Our Case No. 70015990-0037-010

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
APPLICATION FOR UNITED STATES LETTERS PATENT

INVENTORS:	Tibor Urbanek
TITLE:	AMPLIFIER FOR USE WITH VOICE OVER INTERNET PROTOCOL SIGNAL
ATTORNEY:	Brian R. McGinley, Reg. No. 47,782 SONNENSCHEIN NATH & ROSENTHAL LLP P. O. Box 061080, Wacker Drive Station 8000 Sears Tower Chicago, Illinois 60606-1080 (816) 460-2605

AMPLIFIER FOR USE WITH VOICE OVER INTERNET PROTOCOL SIGNAL

BACKGROUND

This invention relates generally to amplifiers, and more specifically to an amplifier specifically designed to handle a voice over internet protocol (VOIP) signal.

In VOIP or other data and TV transmission applications which are used on a two-way cable television (CATV) system, data is typically transmitted from a base station to an end user carried on a frequency bandwidth of 52-1000 MHz, called the downstream signal. Data which is transmitted from the user to the base station is transmitted on a frequency bandwidth of 5-42 MHz, called the upstream signal. Electronic devices which are connected at the end user or base station ends, such as telephony devices and cable modems, separate and combine the upstream and downstream signals internally as necessary for receiving or sending data carried on these signals.

Initially, two-way CATV communications systems did not transmit VOIP data using the downstream and upstream signals since the signals were only being transmitted for use by computers and televisions sets. Losing power for this form of data transmission was not important since computers and TV sets do not work without power either. However, cable and other companies have started to offer telephones through the cable system using signals which transmit VOIP data. Voice conversation is translated into VOIP data and transmitted the same way as any other computer data, such as through the internet. In order to fully compete with telephone companies, VOIP data transmission must be extremely reliable. One of the weak links in VOIP data transmission is supplying the power to external devices which receive VOIP data. Since the conventional telephone system is powered directly from a main office, the telephones still operate when the electrical power fails. However, in a VoIP telephone system, VOIP devices rely on electrical power received from traditional power companies. When the electrical power fails, a VOIP telephone cannot operate, unlike a traditional telephone. Since everybody is used to telephone working even if power is

out, some VOIP devices are equipped with a battery back-up, so that if the electrical power fails in an area, the VOIP device can still operate.

However, many CATV home networks employ the use of an amplifier 20 which receives a downstream signal 34 at an input 24 from the base stations and amplifies the signal 34 using an amplifier 22, as illustrated in FIG. 1. The amplifier 22 outputs an amplified signal 38 with increased signal strength so that the signal may be sent a further distance. High/low filters 28, 30 are employed to allow only the downstream signal 34 to be sent to the amplifier 22 and only the upstream signal 36 to be sent to the base station. A power supply 32 supplies power to the amp 22. In most cases, the amplifier 20 amplifies only downstream signal 34, since the level of the upstream signal 36 is usually high enough.

If the power supply 32 ceases to provide power to the amplifier 22, as in a power outage, not only does the amplifier 22 not amplify the downstream signal 34 anymore, but the amplifier 22 actually attenuates the level of the downstream signal, sometimes by as much as by 30 dB or more. As a result, VOIP data carried by the downstream signal 34 cannot be used by external devices since the downstream signal 34 is too weak. Therefore, a need exists therefore an amplifier which does not attenuate signals when power is not supplied to the amplifier.

SUMMARY

The present invention is defined by the following claims, and nothing in this section should be taken as a limitation on those claims. By way of introduction, the preferred embodiments described below relate to an amplifier circuit for amplifying a downstream signal carrying voice over internet protocol data. The amplifier circuit includes an input which receives the downstream signal, an amplifier, an output, and a bypass circuit. The amplifier receives the downstream signal from the input and amplifies the downstream signal. The amplifier then outputs an amplified signal carrying voice over internet protocol data. The output receives the amplified signal from the amplifier and is connected with an external device capable of receiving and converting voice over internet protocol data to sound. The bypass circuit connects the

input directly to the output. Upon activation of the bypass circuit, the downstream signal is transmitted directly from the input to the output and bypasses the amplifier.

The preferred embodiments further relate to an amplifier for amplifying a signal comprising an amplifier circuit for amplifying a downstream signal carrying voice over internet protocol data. The amplifier circuit includes an amplifier connected between an input and an output of the amplifier circuit and a bypass circuit. The bypass circuit connects the input directly to the output. Upon activation of the bypass circuit, the downstream signal is transmitted directly from the input to the output and bypasses the amplifier.

The preferred embodiments further relate to an amplifier circuit for amplifying a downstream signal carrying voice over internet protocol data. The circuit includes an amplifier having an input and an output, and a bypass circuit. The amplifier receives and amplifies the downstream signal. The bypass circuit has an input connected with the amplifier input and an output connected with the amplifier output. Upon activation of the bypass circuit, the downstream signal is transmitted directly from the input to the output of the bypass circuit and bypasses the amplifier.

DESCRIPTION OF THE DRAWINGS

FIG. 1 depicts a schematic view of an amplifier circuit.

FIG. 2 depicts a schematic view of an amplifier circuit, in accordance with one preferred embodiment of the invention.

FIG. 3 depicts a schematic view of an amplifier circuit, in accordance with one preferred embodiment of the invention.

FIG. 4 depicts a schematic view of an amplifier circuit, in accordance with one preferred embodiment of the invention.

FIG. 5 depicts a schematic view of an amplifier circuit, in accordance with one preferred embodiment of the invention.

FIG. 6 depicts a schematic view of an amplifier circuit, in accordance with one preferred embodiment of the invention.

FIG. 7 depicts a perspective view of an amplifier, in accordance with one preferred embodiment of the invention.

It should be appreciated that for simplicity and clarity of illustration, elements shown in the Figures have not necessarily been drawn to scale. For example, the dimensions of some of the elements are exaggerated relative to each other for clarity. Further, where considered appropriate, reference numerals have been repeated among the Figures to indicate corresponding elements.

DETAILED DESCRIPTION

Referring to FIG. 2, there is shown a schematic view of an amplifier circuit 100, for amplifying a downstream signal 112 carrying voiceover internet protocol (VOIP) data, according to one preferred embodiment. The downstream signal 112 is any signal which can carry voiceover internet protocol data, such as a cable TV signal, a TV signal, any audio/video signal, a cable modem signal, a digital subscriber line signal, a telephone signal, and other such signals. Preferably, the downstream signal 112 is a digital signal used to provide cable television and cable modem services to a household. Preferably, the downstream signal 112 is carried on a frequency of between about 43 and 2000 megahertz and, more preferably, a frequency of between about 52 and 1000 megahertz. The amplifier circuit 100 is used to amplify the downstream signal 112 in order to increase the signal strength of the downstream signal 112 so that the downstream signal 112 may either be sent a longer distance or be sent to multiple devices instead of a single device.

The amplifier circuit 100 includes an input 110 connected in series with an amplifier 130 and an output 120. The input 110 receives the downstream signal 112 and sends the downstream signal 112 to the amplifier 130. The amplifier 130 receives the downstream signal 112 from the input 110 and amplifies the downstream signal 112. The amplifier 130 can be any electronic device which can be used to amplify an electronic signal, such as the downstream signal 112. The amplifier 130 is preferably connected to a power supply 180 which supplies power to the amplifier 130. Once the amplifier 130 receives a signal, such as the downstream signal 112, the amplifier 130 then uses power from the power supply 180 increases the signal strength of the signal. Upon receiving the downstream signal 112, the amplifier 130 amplifies the downstream signal 112 and then outputs an amplified signal 132. Preferably the

amplified signal 132 is from 5 to 50 decibels greater than the downstream signal 112, and more preferably, the amplified signal 132 is from 10 to 30 decibels greater than the downstream signal 112.

The output 120 receives the amplified signal 132 from the amplifier 130 and, preferably, outputs the amplified signal 132 to an external device 190, as illustrated in FIG. 2. The external device 190 may be capable of receiving and converting voiceover internet protocol data into sound. Examples of external device 190 include a cable box, a television set, a VOIP enabled telephone, a computer, and a cable modem. Additionally, the output 120 also receives an upstream signal 116 from the external device 190. Preferably, the upstream signal 116 is a digital signal used to provide cable television and cable modem services to a household. Preferably, the upstream signal 116 is carried on a frequency of between about 1 and 2000 megahertz and, and more preferably a frequency between about 1 and 200 megahertz, and most preferably, a frequency of between about 5 and 42 megahertz.

The amplifier circuit 100 also includes a bypass circuit 140 having an input 146 and an output 147, as illustrated in FIGS. 2-6. The bypass circuit 140 may be activated manually or automatically upon loss of electrical power. Upon activation of the bypass circuit 140, the downstream signal 112 is transmitted directly from the input 146 to the output 147 of the bypass circuit 140 and therefore bypasses the amplifier 130. By providing a bypass circuit 140, the amplifier circuit 100 of the present invention allows the downstream signal 112 to pass from the input 110 to the output 120 without having to go through the amplifier 130. Therefore, when the power supply 180 fails to supply the amplifier 130 with power, the downstream signal 112 does not suffer from any attenuation which may result when the signal 112 passes through the amplifier 130, since the downstream signal 112 bypasses the amplifier 130 completely.

In one embodiment the amplifier circuit 100 includes a first hi-pass/low-pass filter 170 connected between the input 110 and the amplifier 130, as shown in FIG. 2. The first hi-pass/low-pass filter 170 preferably allows only downstream signals 112 to pass through the amplifier 130. Preferably, the first hi-pass/low-pass filter 170 only allows signals carried on a frequency of between 43 and 2000 megahertz and, more

preferably, signals carried on a frequency of between 52 to 1000 megahertz to pass through to the amplifier 130. The first hi-pass/low-pass filter 170 also receives upstream signals 116 from the output 120 and only allows upstream signals 116 to pass through the first hi-pass/low-pass filter 170 to the input 110. Preferably, the first hi-pass/low-pass filter 170 only allows upstream signals 116 carried on a frequency of between 1 and 200 megahertz and more preferably 5 to 42 megahertz to pass through to the input 110.

In one embodiment the amplifier circuit 100 includes a second hi-pass/low-pass filter 172 connected between the output 120 and the amplifier 130, as shown in FIG. 2. The second hi-pass/low-pass filter 172 preferably allows only downstream signals 112 or amplified signals 132 to pass through to the external device 190. Preferably, the second hi-pass/low-pass filter 172 only allows signals carried on a frequency of between 43 and 2000 megahertz and, more preferably, signals carried on a frequency of between 52 to 1000 megahertz to pass through to the external device 190. The second hi-pass/low-pass filter 172 also receives upstream signals 116 from the output 120 and only allows upstream signals 116 to pass through the second hi-pass/low-pass filter 172 to the input 110. Preferably, the second hi-pass/low-pass filter 172 only allows upstream signals 116 carried on a frequency of between 1 and 200 megahertz and more preferably 5 to 42 megahertz to pass through to the input 110.

One embodiment the amplifier circuit 100 includes a splitter 122 located before the output 120 for outputting the amplified signal 132 to multiple external devices 190, as illustrated in FIGS. 3-6. The splitter 122 receives the downstream signal 112 or the amplified signal 132 and divides either the downstream signal 112 or the amplified signal 132 into multiple signals which are then routed to multiple outputs 120 as illustrated in FIGS. 3 through 6. In one embodiment, the splitter 122 includes a dedicated VOIP signal output 124, as illustrated in FIG. 6. In this embodiment, the output 147 of the bypass circuit 140 is directly connected to the dedicated VOIP signal output 124, thus being able to provide only the output 124 with an unamplified downstream signal 112 upon activation of the bypass circuit 140.

In one embodiment the amplifier circuit 100 includes a second amplifier 150 connected in series between the input 110 and the output 120, as illustrated in FIGS. 3

through 6. The second amplifier 150 receives the upstream signal 116 from the output 120 and amplifies the upstream signal 116. The second amplifier 150 can be any electronic device which can be used to amplify an electronic signal, such as the upstream signal 116. The second amplifier 150 is preferably also connected to the power supply 180 which supplies power to the amplifier 150. Once the amplifier 150 receives a signal, such as the upstream signal 116, the amplifier 150 then uses power from the power supply 180 to increase the signal strength of the signal. Upon receiving the upstream signal 116, the amplifier 150 amplifies the upstream signal 116 and then outputs an amplified signal 152. Preferably the amplified signal 152 is from 5 to 50 decibels greater than the upstream signal 116 and, even more preferably, the amplified signal 152 is from 10 to 30 decibels greater than the upstream signal 116.

In one embodiment the amplifier circuit 100 includes a second bypass circuit 160 connecting the output 120 directly to the input 110, as illustrated in FIGS. 4 and 5. Upon activation of the second bypass circuit 160, the upstream signal 116 is transmitted directly from the output 120 to the input 110 and bypasses the second amplifier 150. By providing a second bypass circuit 160, the amplifier circuit 100 of the present invention allows the upstream signal 116 to pass from the output 120 to the input 110 without having to go through the amplifier 150. Therefore, when the power supply 180 fails to supply the amplifier 150 with power, the upstream signal 116 does not suffer from any attenuation which may result when the upstream signal 116 passes through the amplifier 150, since the upstream signal 116 bypasses the amplifier 150 completely.

Referring to FIG. 7, there is shown a perspective view of an amplifier device 101 in accordance with one preferred embodiment of the invention. The amplifier device 101 includes a housing 102 and the amplifier circuit 100. Housing 102 houses the amplifier circuit 100 as illustrated in FIG. 7. Additionally, the amplifier device 101 also includes an input connector 104 connected with the input 110 and an output connector 106 connected with each output 120 as illustrated in FIG. 7. Preferably the input connector 104 and the output connector 106, one of the following types of connectors, an F-type connector, an RCA, a balanced input connector, a BNC type connector and any other type of connector which may be used to connect audio/video

signals and other types of signals. Preferably input and output connectors 104, 106 are coaxial F-type connectors. Moreover, the amplifier device 101 may include an external power adapter 200 connected to the housing 102 and the amplifier 130 via a power cord 202, in order to provide power to the amplifier 130.

Although the invention has been described and illustrated with reference to specific illustrative embodiments thereof, it is not intended that the invention be limited to those illustrative embodiments. Those skilled in the art will recognize that variations and modifications can be made without departing from the spirit of the invention.

CLAIMS

1. An amplifier circuit for amplifying a downstream signal carrying voice over internet protocol data comprising:

an input which receives the downstream signal;

an amplifier which receives the downstream signal from the input and amplifies the downstream signal, wherein the amplifier outputs an amplified signal carrying voice over internet protocol data;

an output which receives the amplified signal from the amplifier, wherein the output is connected with an external device capable of receiving and converting voice over internet protocol data to sound; and

a bypass circuit connecting the input directly to the output, wherein upon activation of the bypass circuit, the downstream signal is transmitted directly from the input to the output and bypasses the amplifier.

2. The amplifier circuit of claim 1, wherein the downstream signal is between 43 and 2000 MHz.

3. The amplifier circuit of claim 1, wherein the amplified signal is from 5 to 50 decibels greater that the downstream signal.

4. The amplifier circuit of claim 1 further comprising a first high-pass/low-pass filter connected between the input and the amplifier, wherein the first high-pass/low-pass filter only allows downstream signals to pass through to the amplifier.

5. The amplifier circuit of claim 1 further comprising a second high-pass/low-pass filter connected between the output and the amplifier, wherein the second high-pass/low-pass filter only allows downstream signals to pass through to the external device capable of receiving and converting voice over internet protocol data to sound.

6. The amplifier circuit of claim 1 further comprising a splitter located before the output for outputting the amplified signal to multiple external devices.

7. An amplifier for amplifying a signal comprising an amplifier circuit for amplifying a downstream signal carrying voice over internet protocol data, wherein the amplifier circuit comprises:

an amplifier connected between an input and an output of the amplifier circuit, and

a bypass circuit connecting the input directly to the output, wherein upon activation of the bypass circuit, the downstream signal is transmitted directly from the input to the output and bypasses the amplifier.

8. The amplifier of claim 7, wherein the downstream signal is between 43 and 2000 MHz.

9. The amplifier of claim 7, wherein the amplifier circuit further comprises a first high-pass/low-pass filter connected between the input and the amplifier, wherein the first high-pass/low-pass filter only allows downstream signals to pass through to the amplifier.

10. The amplifier of claim 7, wherein the amplifier circuit further comprises a second high-pass/low-pass filter connected between the output and the amplifier, wherein the second high-pass/low-pass filter only allows downstream signals to pass through to the output.

11. The amplifier of claim 7, wherein the amplifier circuit further comprises a splitter located before the output for outputting the amplified signal to multiple external devices.

12. The amplifier of claim 7 further comprising an input connector connected with the input and an output connector connected with the output.

13. The amplifier of claim 7 further comprising a power supply connected with the amplifier.

14. An amplifier circuit for amplifying a downstream signal carrying voice over internet protocol data comprising:

an amplifier having an input and an output, wherein the amplifier receives and amplifies the downstream signal; and

a bypass circuit having an input connected with the amplifier input and an output connected with the amplifier output, wherein upon activation of the bypass circuit, the downstream signal is transmitted directly from the input to the output of the bypass circuit and bypasses the amplifier.

15. The amplifier circuit of claim 14, wherein the bypass circuit comprises a switch, wherein upon activation of the switch, the downstream signal is transmitted directly from the input to the output of the bypass circuit and bypasses the amplifier.

16. The amplifier circuit of claim 14, wherein the bypass circuit comprises one of a mechanical switch, a relay, a manual switch, and an electronic switch.

17. The amplifier circuit of claim 14 further comprising a splitter located after the amplifier, the splitter having multiple outputs for outputting the amplified signal to multiple external devices.

18. The amplifier circuit of claim 17, wherein the output of the bypass circuit is connected directly to an output of the splitter.

19. The amplifier circuit of claim 14 further comprising a first high-pass/low-pass filter connected before the amplifier, wherein the first high-pass/low-pass filter only allows downstream signals to pass through to the amplifier.

20. The amplifier circuit of claim 19, wherein the wherein the downstream signal is between 43 and 2000 MHz.

ABSTRACT

An amplifier circuit for amplifying a downstream signal carrying voice over internet protocol data is disclosed. The amplifier circuit includes an input which receives the downstream signal, an amplifier, an output, and a bypass circuit. The amplifier receives the downstream signal from the input and amplifies the downstream signal. The amplifier then outputs an amplified signal carrying voice over internet protocol data. The output receives the amplified signal from the amplifier and is connected with an external device capable of receiving and converting voice over internet protocol data to sound. The bypass circuit connects the input directly to the output. Upon activation of the bypass circuit, the downstream signal is transmitted directly from the input to the output and bypasses the amplifier.

FIG. 1

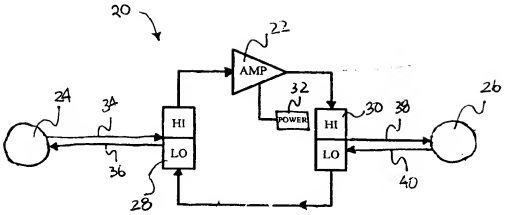


FIG. 2

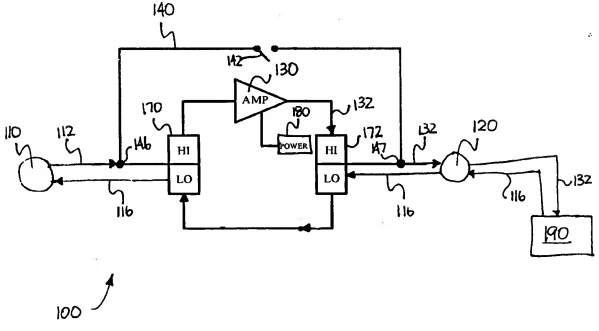


FIG. 3

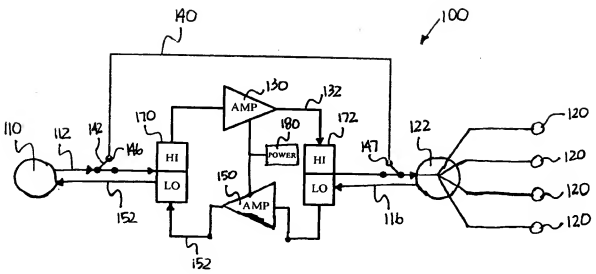


FIG. 4

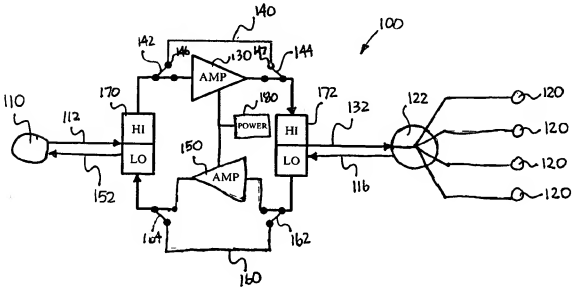


FIG. 5

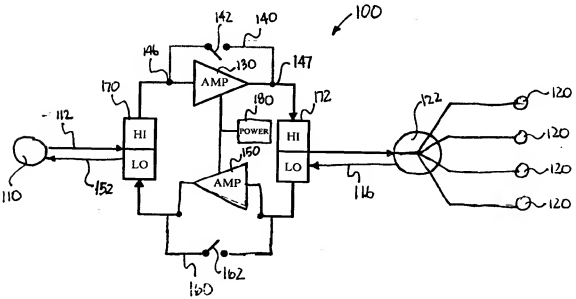


Fig. 6

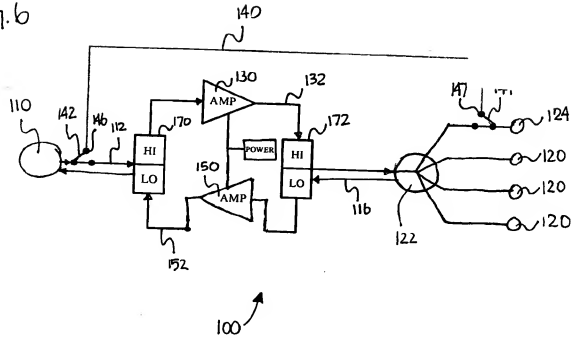
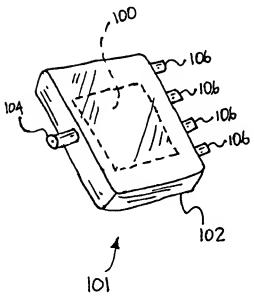


Fig. 7



Docket No. 70015990-0037.010

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare:

That my residence, post office address and citizenship are as stated below next to my name.

That I verily believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if multiple inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

AMPLIFIER FOR USE WITH VOICE OVER INTERNET PROTOCOL SIGNAL

the specification of which (check one)

☒ is attached hereto.
☐ Was filed on: _____ as
☐ Application Serial No.: _____
and was amended on: _____

That I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

That I acknowledge the duty to disclose information known to be material to patentability of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

That I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate on this invention having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)

(Number)	(Country)	(Day/Month/Year Filed)	Priority Claimed Yes	No
			☐	☐
			☐	☐

Prior United States Provisional Application(s)

That I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below.

(Application Number)	(Filing Date)

Prior United States Application(s)

That I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.)	(Filing Date)	(Status)-(Patented, pending, abandoned)

That all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

I hereby appoint the attorney(s) and agent(s) of Sonnenschein Nath & Rosenthal LLP associated with Customer Number 26263, with full power of revocation and substitution, to prosecute this application and to transact all business with the United States Patent and Trademark Office in connection therewith.

I request that all correspondence and telephone calls in respect to this application be directed to

Address for Correspondence:	**Brian R. McGinley** **Sonnenschein Nath & Rosenthal LLP** **P.O. Box #061080** **Wacker Drive Station** **Sears Tower** **Chicago, Illinois 60606-1080** **(816) 460-2400 (phone)** **(816) 531-7545 (facsimile)**
Full name of sole or one joint inventor:	Tibor Urbanek
Inventor's signature:	_____
Date:	_____
Residence:	
Citizenship:	USA